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ABSTRACT

The implementation of a four-day week (Monday-Thursday) for on-campus classes at the College of DuPage, an Illinois community college, was assessed in terms of student registration: class enrollment: student success rates: instructional quality: and savings resulting from driving differences, energy use, and building maintenance. Withdrawal and failure rates and grade point averages in the four-day week implemented during the summer quarter 1980 were compared to those occurring during the regular schedule of the previous summer, and the reactions of students, college faculty, and nonteaching employees were considered. It was found that the shortened week did not affect student success rates, and class enrollment and grade point averages were normal. The four-day summer schedule received general support from students and employees. Approximately 72 percent of the respondents liked the four-day schedule and 15 percent had no preference, while approximately 13 percent did not prefer it. More employees (20 percent) reported problems with the schedule than students (5 percent). Reaction to a proposed four day schedule for the whole school year was less favorable: 69 percent of the employees and 58 percent of students favored the option. Savings were realized from the reduction in driving and electricity usage during the 12 weeks of the four-day schedule. Cost savings due to a reduction in miles driven was estimated at more than $30,000, and savings from reduced building maintenance was in excess of $23,000. (SW)

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ACADEMIC EFFECTS AND COST BENEFIT OF A FOUR-DAY WEEK AT COLLEGE OF DuPAGE, AN ILLINOIS COMMUNITY COLLEGE

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BY: CAROL C. WALLACE, COORDINATOR OF RESEARCH

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15E(1) ACADEMIC EFFECTS AND COST BENEFIT OF A FOUR-DAY WEEK AT COLLEGE OF DuPAGE, AN ILLINOIS COMMUNITY COLLEGE

CAROL C. WALLACE, Coordinator of Research, College of DuPage

During the Summer Quarter 1980, College of DuPage offered on-campus classes within a four-day week (Monday-Thursday). The Institutional Research Office evaluated the effects of the condensed classes on student registration, class enrollment, student success rates, and instructional quality. A comparison was made using Phi and t statistics of withdrawal and failure rates, and GPA in the condensed classes, between the four-day week and the previous summer. Personal preferences of students, faculty, and employees were surveyed. An estimate was made of the energy savings from driving differences by using self-reported mileage of students, faculty, and employees. The savings from reduced building maintenance was obtained by comparing electricity charges during the four-day week with those for the previous summer. It was found that the shortened week did not affect student success rates. Class enrollment and GPA were normal. Student and faculty reaction to the four-day week was positive, and employee reaction was moderately positive. Cost savings due to a reduction in miles driven was estimated at more than $30,000. Cost savings from reduced building maintenance was in excess of $23,000.

ABSTRACT

Effects of the 4-Day Week at College of DuPage Summer 1980

By: C.C. Wallace

Summer Quarter 1980 was the first time a 4-day schedule was tried at C/D. The effects of this schedule on students, student success rate, enrollment, employees, and operating costs were considered pertinent to the success and continuance of this schedule. The Office of Institutional Research measured some of the effects of the condensed classes and the 4-day work week.

OVERALL REACTION

The 4-day summer schedule received general support from students and employees. Approximately 72% of the people liked the 4-day schedule and 15% had no preference; roughly 13% did not prefer it. More employees (20%) reported problems with the 4-day schedule than students (5%). Inconveniences most often reported were lack of access to labs in Building A on the weekend, uncomfortable hot temperatures, and adjustments for absent employees. Employees were strongly in favor of going to a 4-day week in subsequent quarters (87%) and students generally preferred it for summer quarter (71%). Reaction to a 4-day schedule throughout the year was less favorable - 69% of the employees and 58% of regular C/D students favored the option.

OVERALL SAVINGS OF THE 4-DAY WEEK

Savings were realized from the reduction in driving and electricity during the 12 weeks of the 4-day schedule. The collective mileage reduction was a factor of average mileage for each group, the number of people in each group who reduced driving to campus one day per week, and the number of weeks they came to campus. The IRS rate per mile of $.20 was used to compute the dollar savings of the mileage reduction. Collectively, people who reduced their trips to campus by one trip per week saved $31,104: students - $25,432.20; faculty - $1,846.20; non-teaching employees - $3,825.60.

A savings in electricity was realized with the closing of Building A Friday through Sunday for 12 weeks. Kilowatt hour use and charges vary with peak periods of demand. The kilowatt hour reduction was computed by prorating the daily use and charges for the number of days for which service was reduced within a billing period. This method assumes that the use and charges for the closed days would have been similar to the average daily use and charges for the other days in the same billing period. The reduction in kilowatt hours for the 12 weeks was approximately 443,115 at a savings of $23,136.00.

EFFECTS OF THE 4-DAY WEEK ON C/D STUDENTS AND EMPLOYEES

INTRODUCTION

Summer Quarter 1980 was the first time a 4-day schedule was tried at C/D. The effects of this schedule on students, student success rate enrollment, employees, and operating costs were considered pertinent to the success and continuance of this schedule. The Office of Institutional Research was requested to measure some of the effects of the condensed classes and the 4-day working schedule. Surveys were distributed to the students, faculty and employees who were affected by the 4-day schedule to elicit problems or preferences. Enrollment, grades and withdrawal rates of the 4-day classes and of the previous summer classes were compared. The savings from reductions of driving and air conditioning use were estimated.

This report provides the reactions to the 4-day week of three major groups: students, faculty and non-teaching employees.

I. STUDENT REACTION

METHOD

Students were affected in several areas by the 4-day schedule: planning for summer enrollment, registering for summer classes, scheduling classes in Building A, and enrolling in a condensed class (a class meeting 4 days a week which usually met 5 days per week). In an effort to be aware of student reaction in these areas and to insure a comprehensive reading of the extent of any difficulties, students were surveyed before Summer Quarter, during Summer Quarter registration, and in the Summer Quarter classes.

Spring Quarter students were surveyed prior to Summer Quarter registration in order to estimate the impact of difficulties presented by the 4-day schedule on enrollment. In this way, the attempt was made to survey students who expected to enroll for Summer Quarter, but who would find that the four-day schedule was a deterrent. Students who found the four-day schedule to be a deterrent to enrolling for Summer Quarter would, of course, not be surveyed during the Summer Quarter.

During Summer Quarter, only classes held in Building A were surveyed since only Building A was closed for three days per week. The survey (Appendix A) was distributed to students through their classroom instructor during one week of the Summer Quarter when four sessions were meeting. In this way, classes in the 3-week, 5-week, 8-week and 10-week sessions were surveyed. Four classes were selected from each of the sub-divisions, which met in Building A which provided 50 to 70 students to survey from each sub-division (Appendix B). A variety of courses, instructors, and times of day were selected. A total of 380 surveys were distributed to 28 classes. Two five week classes had ended by the time the survey was

received and two classes had been cancelled. Instructors were very helpful in this distribution process which insured a good return. Completed surveys totalled 309.

FINDINGS

Generally, Spring Quarter students who planned to enroll for Summer Quarter anticipated greater difficulty than they encountered. Thirty-one percent of Spring Quarter students anticipated difficulty of some kind and 24% of them thought this would cause them to decrease their desired course load for Summer Quarter. Actually, only 9% of the registrants for Summer Quarter and 15% of students in summer classes reported some difficulty caused by the four-day schedule. In their comments, summer students reported inconvenience because the DLL and computer labs were not open Friday through Sunday, and because some class sessions were too long.

The enrollment impact of the 4-day schedule was estimated prior to Summer Quarter at a maximum decrease of 7% full-time equivalent. This estimate was made using the projected Summer Quarter FTE, the average credit load of students and the number of students who foresaw being unable to enroll due to the 4-day schedule. Of students who did enroll for Summer Quarter, 2.3% reported that the 4-day schedule caused them to decrease their desired courseload. A decrease of one course by 2.3% of the students would have resulted in approximately a 1% decrease in Summer Quarter FTE. Overall, the 4-day schedule did not have a negative impact on Summer Quarter enrollment. Any negative effects on enrollment which may have been caused by the schedule were outweighed by other factors which caused FTE to increase 31%. Table 1 itemizes the difficulties foreseen and experienced by students.

TABLE 1

Students' Expected and Experienced Difficulties
With the 4-Day Schedule

Difficulty	Foreseen by Spring Students (N=176)	Reported at Summer Registration (N=294)	Reported In Summer Class (N=309)
None	69%	88%	84.5%
Difficulty in scheduling classes	9%	7%	2.3%
Decrease in desired course load	24%	---	2.3%
Transportation, Work hours, Babysitting problems	5%	2%	4.5%
Other problems	8%	---	6%
Prefer 50-minute class 5 days	3%	3%	4.5%

Note: multiple answer choices allowed greater than 100% response.

Students' characteristics were reviewed as they related to difficulties experienced when registering for and during the 4-day Summer Quarter.

During registration, students who lived a greater distance from class, had more trips per week to class, and were enrolling for the 5-week or 10-week sessions, most often reported the need to reduce the course load they had expected to take. Students who reported difficulties generally carried a higher class load than other students; 2.0 classes versus 1.65 classes. Students who had more than average miles to drive to class reported work hour, babysitting and transportation difficulties more frequently. Tables 2 and 3 show students' scheduling difficulties during registration and difficulties experienced during the quarter.

TABLE 2

Students' Scheduling Difficulties Reported at the Time of Registration

	Avg. Course Load	Miles Home To Class	Trips Per Week To Class	3-week (N=19)	5-week (N=25)	8-week (N=87)	10-week (N=220)
None (N=289)	1.65	9.1	3.6	95%	92%	95%	94%
Scheduling Difficulty (N=7)	2.00	7.2	3.7	5%	0	2%	3%
Scheduling Difficulty and decrease course load (N=7)	1.25	12.4	4.4	0	4%	0	2%
Other Difficulties (N=4)				0	4%	2%	1%
				100%	100%	100%	100%

TABLE 3

Students' Difficulties Reported During the Quarter

Difficulty During Quarter	Average Course Load	Miles Home To Class	Trips per Week to Class	Enrolled			
				3-week	5-week	8-week	10-week
None (N=261)	1.65	8.99	3.64	90%	79%	86%	87%
Work, Babysitting, Transportation (N=14)	2.17	10.64	4.00	5%	0	1%	5%
Other Difficulty (N=14)	2.10	9.00	3.40	0	8%	5%	5%
Prefer 50-minute Class (N=16)	1.50	10.36	3.36	5%	13%	8%	3%
Overall Average	1.68	9.10	3.63	100%	100%	100%	100%

Overall, 71% of the summer students preferred the 4-day schedule, 18% had no preference, and 10% did not favor the schedule. Students indicated the three day weekend and the decrease in driving were the most attractive benefits of the 4-day schedule. When students responded to the possibility of the 4-day schedule throughout the year, 58% of C/D students were in favor, 18% had no preference, and 24% were opposed; 16% of the summer students were not year round C/D students.

Students' success rates were considered as a reaction to the condensed classes. The percent withdrawals, percent failures, and GPA by class were compared between the condensed classes in 1980 and the same classes which met 5 days per week during Summer Quarter 1979. Only classes which met five days per week last summer and were on a condensed schedule this summer were considered in this comparison (Appendix C). Withdrawal and failure rates were compared on a class by class basis within the same length session; class GPA was considered on a session to session basis. The phi statistic was used for determining the correlation of withdrawal and failure rates between the two summer quarters. Phi is appropriate for two sets of dichotomous variables and can be converted into chi^2 to determine significant difference. Thirty-one classes out of the 34 compared showed no correlation of withdrawal rates with the condensed classes. Three classes showed a correlation between greater withdrawal rates and the Summer Quarter 1980 condensed classes: Electronic Technology 101 in the three week session (phi=.274, chi=.438, p=.05); and in the 10 week session, Math 110 (phi=.317, chi=6.23, p=.02) and Psychology 100 (phi=.242, chi=3.92, p=.05). One class showed a correlation of a greater rate of withdrawal with the 5-day class in 1979; this was Math 130 in the 10-week session (phi=.286, chi=4.19, p=.05). A comparison of failure rates did not show any correlation with the condensed classes. A t-test was used to test for the difference of grade point average for classes within the sessions. 1980 class GPA's did not differ significantly from GPA's of Summer Quarter 1979. Table 4 provides a quick comparison of headcount, withdrawal and failure rates, and GPA in the sessions in the condensed classes and those of the previous summer.

TABLE 4

Student Success Rates in Condensed and Regular Classes

	3 Week Sessions (11 classes)				5 Week Sessions (5 classes)				8 Week Session (1 class)				10 Week Session (17 classes)			
	HC	W%	F%	GPA	HC	W%	F%	GPA	HC	W%	F%	GPA	HC	W%	F%	GPA
Summer Qtr. '79 5 Days/week	280	4.2	7.5	2.96	84	7.0	1.2	3.16	13	0	0	3.57	467	17.8	7.8	2.63
Summer Qtr. '80 Condensed Classes	292	7.2	5.8	2.78	101	5.9	4.9	2.89	19	10.0	15.0	1.94	501	18.7	8.2	2.63
t				>.10				>.10								>.10

Particular scrutiny was given to the condensed lab courses, Biology 101, 102 and 103,in the three week session. The failure and withdrawal rates were normal in the classes offered in '79 and '80. A comparison of GPA showed no trend. Enrollment was lower in the '80 classes which may indicate that the four-day schedule was a deterrent to some students. However, students who were enrolled experienced no unusual difficulty.

TABLE 5.

Success Rates in Condensed Lab Courses 1979 and 1980

	Enrolled		Withdrew		Failed		Completed		Class GPA		Grades Above F	
	'79	'80	'79	'80	'79	'80	'79	'80	'79	'80	'79	'80
Biology 101	24	14	2	1	0	0	92%	93%	2.86	3.15	100%	100%
Biology 102	18	13	1	1	1	0	94%	92%	2.94	2.50	94%	100%
Biology 103	10	12	1	1	0	0	90%	92%	3.11	2.90	100%	100%

Estimates of energy savings due to reduced driving during the 4-day week were made using self-reported mileage of students. The average round-trip mileage from home to class for students was 18 miles. Seventy-one percent of the students were enrolled in a class which met in Building A 4-days a week and 30% were enrolled in more than one such class. This information was used to estimate that roughly 30% of the students in the 3-week and 5-week sessions were also enrolled in another condensed class. Mileage savings were then computed for the number of students enrolled by session, accounting for multiple enrollment, by considering that driving was reduced by one round trip per week for the length of the session. Average dollar savings per session were computed, and collective mileage reduction and dollar savings by session were computed for the 930 students enrolled in the condensed classes. *Overall, student reduction in driving one day less per week as 127,181 miles at a cost savings of $25,432.00.* Table 6 shows the mileage reduction and savings per session of the condensed classes.

TABLE 6

Student Savings By Driving the 4-Day Week

	Savings per Student		Collective Savings	
	Avg. Miles*	Avg. Dollar**	Miles	Dollars**
3-Week (290) † (All sessions)	54	$13.80#	20045	$4009.00
5-Week (100) (All sessions)	90	$23.00#	11520	$2300.00
8-week (39)	144	$28.80	5616	$1123.20
10-week (501)	180	$36.00	90000	$18000.00
Total			127181	$25432.20

* Average round-trip mileage (home to class) per student in the condensed classes was 18 miles.

** In the 3-week sessions, students taking one class saved $10.80; two condensed classes: $21.60.

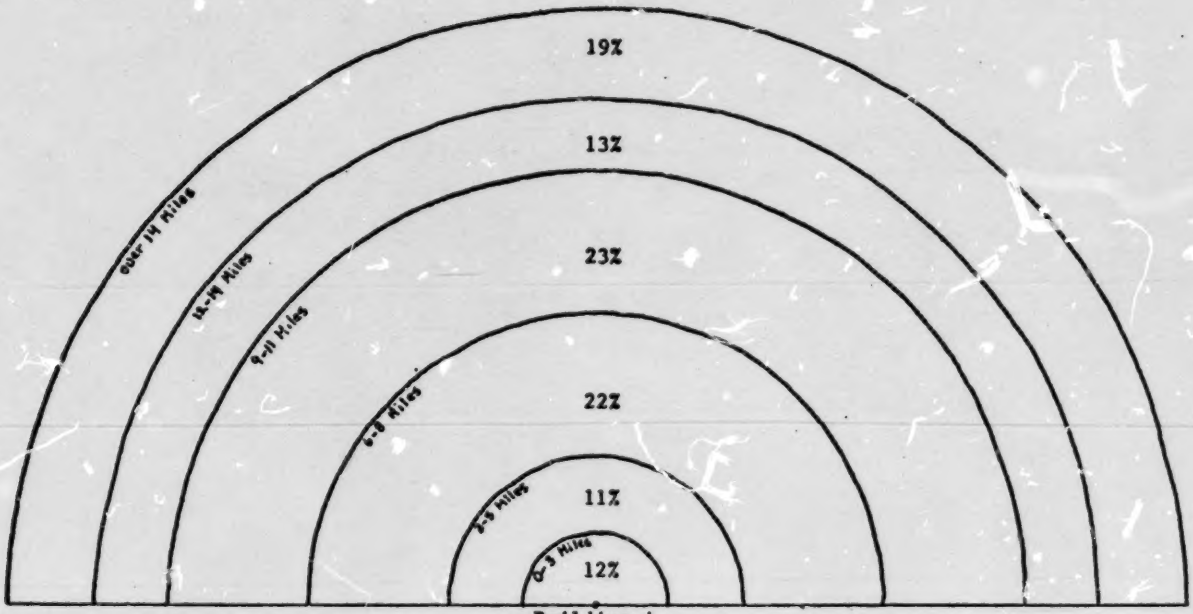
† Only students enrolled in the condensed classes are included in this table.

IRS cost of $.20 per mile was used for estimates.

The average distance from home to class of all students was 9 miles, or 18 miles round-trip, the same as the average mileage of students in the condensed classes. Roughly a third of the students lived 3 to 8 miles away (33%), a third lived 9 to 14 miles away (36%), and a third lived up to 3 miles or more than 14 miles away (31%). Figure 1 shows the distances that students traveled from home to classes in Building A.

FIGURE 1

Distance from Students' Homes to Building A



N=307

II. TEACHING FACULTY

METHOD

Summer Quarter faculty were surveyed for their reactions to the 4-day week. Surveys were mailed to their homes on their last week of teaching for the Summer Quarter (Appendix D). In this way, they had experienced the 4-day week for an ample amount of time and would receive the survey even if they were no longer coming to campus for a class. Surveys were sent to 122 faculty and 86 were completed and returned.

FINDINGS

Faculty who taught during Summer Quarter and were full-time instructors during the school year were surveyed to elicit their preferences or problems experienced during the 4-day week, the effectiveness of classroom activities, and the mileage reduction during the 4-day week. Most faculty were affected in some way by the 4-day week although not all of them taught one of the condensed classes. Of the respondents, 46 instructors reported that they had taught a condensed class which usually met 5 days per week during the school year.

To augment the comparison of student success rates, faculty who taught a condensed class were asked if the classroom activities were as effective in the 4-day schedule. Most of the faculty (39) thought classroom activities were as effective, 8 faculty did not think so and 3 faculty did not know since they had not taught that class on the 5 day schedule. In their comments, faculty expressed concern about the limitations placed on students who needed access to the data processing lab on Saturday and students who could attend class only on Saturdays (assuming that the class was not offered at another location). Faculty noted that the beginning and ending times of classes in the 4-day schedule could have created conflicts because some condensed classes did not end on the hour or on the half-hour and so overlapped with the start of other classes. Generally, faculty felt they were able to maintain office hours which were sufficient for student needs (93%), a few felt that the 4-day schedule did not allow them to keep sufficient office hours (2%), and others were not sure (5%). Many faculty thought that the 4-day schedule was accepted or not noticed by students (72%), or that it was generally accepted with a few problems (22%), and some faculty thought that it was generally unaccepted by students (5%).

Faculty were generally in favor of continuing the 4-day schedule during summer quarters (85%), a few were opposed (8%), or undecided (6%). Faculty support for the 4-day schedule was unrelated to the distance driven by faculty to Building A. However, faculty support was related to faculty perceptions of student acceptance of the 4-day schedule. Faculty who thought students accepted or had few problems with the schedule tended to be in favor, whereas faculty who opposed or were undecided about the schedule tended to perceive that it was generally unaccepted or accepted with a few problems by students.

Faculty reported discomfort caused by the poor temperature control in Building A. Although 73 faculty reported that the schedule created no inconvenience to them, 9 reported various inconveniences including being unable to work in their offices on the weekends. Faculty indicated that the greatest benefits of the 4-day week were having an extra day off, doing less driving, and more efficient use of their time.

Comments were made which proposed that for the Summer Quarter, the campus be open 4 days a week which would include one weekend day in order to satisfy students and faculty who wanted access to the building on a weekend. Faculty were divided when they reacted to the possibility of a 4-day schedule during the school year with 66% in favor, 18% opposed, and 16% undecided. Their comments suggested that the 4-day schedule would be just as beneficial during winter quarters and that a 3-day week would be even more economical.

Estimates of the mileage reduction and cost savings of driving during the 4-day week were made for the number of faculty who were teaching a condensed class. The average round-trip mileage from home to Building A of Summer Quarter faculty was 15.7 and the average weekly mileage was 38. Mileage savings were then computed by considering that driving was reduced by one round-trip per week for the length of the session. The average savings per instructor was computed for all the faculty who were teaching a condensed class. *Overall, faculty reduction in driving one day less per week was 9,231.5 miles at a savings of $1.846.* Table 7 shows the mileage reduction and savings per session. The savings relaized by an instructor who taught multiple condensed classes would have been greater than average.

TABLE 7

Faculty Savings by Driving a 4-Day Week

	Savings per Instructor		Collective Savings	
	Avg. Miles*	Avg. Dollars#	Miles	Dollars#
3-week (N=13) (All sessions)	47.0	$9.40	612.0	$122.50
5-week (N=11) (All sessions)	78.5	$15.70	863.5	$172.70
8-week (N=18)	125.6	$25.10	2261.0	$452.00
10-week (N=35)	157.0	$31.40	5495.0	$1099.00
Total			9231.5	$1846.20

Note: Only the number of instructors who were teaching a class which normally met 5 days per week during the school year were included in this table.

* Average round-trip mileage from home to Building A per faculty was 15.7

\# IRS cost of $.20 per mile was used for estimate

III. NON-TEACHING FACULTY AND CLASSIFIED PERSONNEL

METHOD

Surveys were sent to every full-time and part-time employee of College of DuPage (Appendices E,F). Surveys were sent to 71 non-teaching faculty (55 administrators and 16 counselors or consultants) of which 64 were returned completed. Surveys were sent to 312 classified employees, of which 142 were returned completed. The response rate should give a good reading of the reactions of non-teaching faculty and at least a fair reading of the reactions of classified personnel. The non-teaching employees had the opportunity to indicate if they had opted to work a 4-day week, their preferences and their problems associated with the schedule this summer, their preference for the 4-day schedule in the future, their perception of office productivity on the schedule, and the driving reduction during the 4-day schedule.

FINDINGS

Non-teaching employees were given several options of working hours during the time that the 4-day schedule was in effect. Offices on the West Campus remained open five daysa week, therefore, employees could maintain the normal five 8-hour days, or for part-time employees, work the normal part-time hours in a four day period. Other options were to work four 10-hour days, four 9-hour days plus one half day, four 8-hour days and take one vacation day, four 8-hour days and one day without pay, or some other schedule approved by the supervisor which would accomodate office needs. Of the respondents, 45 non-teaching faculty reported they did pick a 4-day option and 95 of the classified reported they did pick a 4-day option. At least two-thirds of these people opted to work four 10-hour days each week. Other arrangements named by respondents were a variable week-by-week schedule and different combinations of reduced pay days. Table 8 shows the options taken by employees.

TABLE 8

Classified and Non-Teaching Faculty Options During 4-Day Schedule

	Summer Schedule		Type of Option					
	4-Day Option	Normal Workweek	4-Day 10 Hrs.	4-Day 8 Hrs.	4-Day 9½ Hrs.	Part-Time 4 Day	Part-Time Reduced Hours	Other
Non-Teaching Faculty (N=64)	46	18	35	3	3	0	0	5
Classified (N=142)	98	44	58	10	13	3	1	13

Most employees were affected in some way by the 4-day schedule even if they were not on a 4-day work option. Classified and non-teaching faculty were similar in their responses to the 4-day week. Most employees found that the 4-day schedule did not create any problems for them (75%). This was true for employees who worked a 4-day option as well as those who remained on their normal workweek (Table 8). A few employees indicated that the longer work day was inconvenient due to transportation, family obligations, or that it was too tiring (5%).

TABLE 9

Non-Teaching Employee Participation and Problems in the 4-Day Schedule

	Worked a 4-Day Option	Worked a Normal Workweek
No Problems	111	37
Transportation or Family obligations	3	2
Tiring	7	0
Unable to make-up the 5th day	0	0
Other	19	17

A careful review was made of the reactions of employees in Building A as they had fewer working options available to them. Employees in Building A reported no more problems and liked the 4-day week to the same extent as employees in other on-campus buildings (Table 10).

TABLE 10

Reaction to 4-day Week	Primary Work Place: Building A (N=63)	Other On-Campus (N=123)	Off-Campus Throughout Campus (N=10)
Liked it	87%	70%	40%
Didn't Like it	10%	15%	10%
No Preference	3%	15%	50%
No Problems	79%	72%	90%
Transportation, Family Obligations	3%	2%	—
Too tiring	8%	2%	—
Unable to make-up 5th day	10%	24%	10%
Other			

Employee comments indicated two inconveniences which were widespread: an uncomfortable temperature in the buildings and the need for adjustments for the absence of other employees. The discomfort was caused by temperatures reported at 90 to 100 degrees. Adjustments for the absence of other employees took several forms. The most often named was that people were unavailable at varying times of the week who were needed for information or to plan meetings. Varying absences also required adjustments in work load due to covering for days off of other employees within an office or because interoffice work was dependent on the availability and consistency of work. Additionally, when some employees opted for reduced working hours, the work load was shifted to the remaining employees. Some student service offices noted that it was difficult to meet the demand for student contact during busy times because employees were absent. A few employees thought it was difficult to get work done in four days even if the weekly hours were the same.

Overall, employees liked the 4-day schedule (73%) or had no preference (13%); some did not like it (13%). Some employees who cited problems experienced with the 4-day schedule still liked having a 4-day option and some employees who experienced no problems did not like the 4-day schedule (Table 11).

TABLE 11

Problems and Preference for the 4-Day Schedule

	Liked it	Didn't Like it	No Preference
No Problem	116	6	18
Transportation, family obligation	1	4	0
Tiring	3	3	0
Unable to make-up 5th day	0	0	0
Other	17	10	3

The aspect of the 4-day schedule most appreciated by the employees was the flexibility of a day off (71%). Other benefits were getting paychecks a day earlier (10%) and reduced driving (9%). Employees commented that the longer working day provided certain hours during the day which had fewer interruptions and allowed for a better working atmosphere.

In looking forward to next summer, 88% of employees were in favor of doing the 4-day schedule again. Employees in Building A and in other on-campus buildings were equally in favor of the schedule. Most employees were in favor of extending the 4-day schedule to 15 weeks for next summer (77%) and others wanted the schedule only for the 11 weeks between graduation and Labor Day (13%). Of the 11% of employees who did not want the 4-day schedule, many indicated the varying day off was the cause of their opposition. However, if the entire college was closed on one day, avoiding the variable absence schedule, some of these employees would be in favor of a 4-day schedule for next Summer Quarter.

Greater oppostion was given to the suggestion of the 4-day schedule during the school year (30% opposed). Employees expressed concern for the limited access students would have to the data processing lab and the DLL. Suggestions were made that during the school year, a 4-day week would be appropriate during college breaks providing all employees were absent on the same day.

The 4-day week had a varied effect on services and productivity in the different college offices. Some offices typically experience low activity during Summer Quarter and could allow staff to opt for reduced working hours. Other offices were short-handed at peak times. The total reduction of working hours opted by employees, along with the savings to the college in salary, would be of interest in this report (excluding vacation time used as part of an option). This information was not available from college records. In some way, however, the effect of the 4-day week on the functioning of the college as a whole should be considered.

To get a general idea of how the 4-day schedule affected the rate of work, employees were asked to compare the productivity and service of their office and of other offices with that during the 5-day week. Non-teaching faculty were less likely to respond regarding their own office but tended to be willing to compare other offices. Among non-teaching faculty, 45% thought their own office productivity was 92% to 100% of 5 day week productivity, and 40% declined to make a comparison. Among classified personnel, 53% rated productivity in their own office at 92% to 100% of that of the 5 day week, and 22% did not respond. Employees in Building A and employees in other on-campus buildings had similar perceptions of office productivity. Among non-teaching faculty, 59% thought that other offices were at 92% to 100$ of normal productivity and 5% did not respond. Among classified personnel, 41% thought that other offices were 80% to 90% of normal productivity, 10% did not respond. Table 10 shows the comparison of office productivity made by non-teaching faculty and classified personnel.

TABLE 12

Office Productivity During 4-Day Week Compared to 5-Day Week

Productivity when compared to 5-day week	Non-Teaching Faculty		Classified	
	My Office	Other Office	My Office	Other Offices
90%-100%	29	38	90	58
80%-90%	7	8	12	35
70%-80%	3	8	6	13
60%-70%	0	1	0	4
Less than 60%	0	0	0	1
No answer	25	3	31	17
Not applicable	0	6	3	14

An estimate was made of the mileage reduction and cost savings realized by employees who opted for a four-day week. An average of 15 miles round-trip from home to work was derived from the self-reported mileage of employees who took a four-day option. Employees who took an option which still required them to drive to campus 5 days a week were not included. Using this average, the savings in mileage and dollars for the 12 week duration of the 4-day schedule was estimated. Responses showed that 106 people reduced their trips to work by one day a week resulting in an average savings per person for the summer of 180 miles and $36.00. *Collectively, non-teaching employees reduced driving by*

19,128 miles and realized a savings of $3,825. The savings may actually be twice that amount since responses were not received from 45% of the classified personnel. Considering that 336 employees were employed full-time during the Summer Quarter, if the school was closed one day per week, resulting in an average mileage reduction of 14 miles per person, the collective mileage reduction would be 56,448 miles at a savings of $11,289.

Non-teaching faculty and classified did differ in their driving patterns. The average round-trip distance from home to work for faculty was 16.5 miles and for classified 13 miles. Non-teaching faculty averaged 6 trips to campus per week whereas classified averaged 5 trips per week.

Table 13 shows the mileage and dollar savings by working the 4-day week of non-teaching faculty and classified.

TABLE 13

Non-Teaching Employee Savings by Driving the 4-Day Week*

Miles Home to Work (round-trip)	Number of People	Summer Savings	
		Miles	Dollars**
Up to 3	30	1440	$ 288.00
3-8	32	4296	$ 859.20
9-14	30	8352	$1670.40
More than 14	14	5040	$1008.00
Average per person 15		180.5	$ 36.10
Collective Savings	106	19128	$3825.60
Collective Savings 100% participation	336 (full-time)	56448#	$11289.60

* This table includes only the survey respondents who normally come to work 5 days per week but this summer came in 4 days per week (except for the 100% participation figure).

** IRS cost of $.20 per mile was used for the estimates

\# Average round-trip mileage of all respondents was 14

OVERALL REACTIONS

The 4-day summer schedule received general support from students and employees. Approximately 72% of the people liked the 4-day schedule and 15% had no preference; roughly 13% did not prefer it. More employees (20%) reported problems with the 4-day schedule than students (5%). Inconveniences most often reported were lack of access to labs in Building A on the weekend, uncomfortable hot temperatures, and adjustments for absent employees. Employees were strongly in favor of going to a 4-day week in subsequent quarters (87%) and students generally preferred it for summer quarter (71%). Reaction to a 4-day schedule throughout the year was less favorable - 69% of employees and 58% of regular C/D students favored the option.

ELECTRICITY AND MAINTENANCE SAVINGS

An estimate of the savings of kilowatt hours and electrical costs was made. Electrical use was reduced for 12 days over 4 monthly billing periods. Electrical costs include air conditioning, dehumidification, lights, and the daily start-up of the cooling system. These costs are all directly related to demand and are billed to the customer on a graduated fee scale which takes into account peak periods of electrical demand (Appendix G). The savings from closing the building on Fridays could be most closely approximated by prorating the daily use and charges for the billing period in which they fell. This method assumes that the use and charges for the closed days would have been similar to the average daily use and charges for other days in the same billing period. The average use prorated for the reduced days in June and August may be underestimated because it includes some lower demand days in May and September. However, the average charges prorated for the reduced days in July and August may be overestimated because, as more kilowatts are used, additional kilowatts are charged at a lower rate. *This method showed a savings for the Summer of $23,136 and a reduction of 443,115 kilowatt hours.*

Maintenance costs for this period of time were not reduced. Employees opted for one of the 4-day schedules or, in some cases, were required to maintain a 5-day work week.

TABLE 14

Electricity Savings During 4-Day Week

Electric Charges				Reduction		
	5/22/80 - 9/21/80					
Month	Kilowatt Hrs.	Cost	Operating Days	Days	Kilowatt Hrs.	Cost
June	842,400	$ 46,052.49	29	2	60,171	$ 3,176
July	1,010,400	53,150.62	27	4	149,689	$ 7,874
August	1,053,600	53,884.80	26	5	202,615	$10,362
September	919,200	51,723.97	30	1	30,640	$ 1,724
	3,825,600	$204,811.88	112	12	443,115	$23,136

OVERALL SAVINGS OF THE 4-DAY WEEK

Savings were realized from a reduction in driving and electricity during the 12 weeks of the 4-day schedule. Self-reported mileage from home to campus was averaged for students, faculty and non-teaching employees. The collective mileage reduction was a factor of average mileage for each group, the number of people in the group who reduced driving to campus one day per week, and the number of weeks they came to campus. The reduction for the three groups was a total of 155,540 miles: students - 127,181 miles (average 18 miles); faculty - 9,231 miles (average 15.7 miles); non-teaching employees - 19,128 miles (average 14 miles). The IRS rate per mile of $.20 was used to compute the dollar savings of the mileage reduction. Collectively, people who reduced their trips to campus by one trip per week saved $31,104: students - $25,432.20; faculty - $1,846.20; non-teaching employees - $3,825.60.

A savings in electricity was realized with the closing of Building A Friday through Sunday for 12 weeks. Kilowatt hour use and charges vary with peak periods of demand. The kilowatt hour reduction was computed by prorating the daily use and charges for the number of days for which service was reduced within a billing period. This method assumes that the use and charges for the closed days would have been similar to the average daily use and charges for the other days in the same billing period. The reduction in kilowatt hours for the 12 weeks was approximately 443,115 at a savings of $23,136.

The available information was used to determine an overall savings from closing Building A on Friday through Sunday for 12 summer weeks of $31,104 by 1113 people and $23,136 on the college budget. These are modest estimates because information was not available on the savings from reduced driving for 213 employees and the savings to the college of voluntarily reduced work hours.

ITEMIZED SUMMARY

Summer Quarter 1980 was the first time a 4-day schedule was tried at C/D. The effects of this schedule on students, student success rate enrollment, employees, and operating costs were considered pertinent to the success and continuance of this schedule. The Office of Institutional Research measured some of the effects of the condensed classes and the 4-day work week. The findings follow:

STUDENT REACTION (N=309, survey sample)

- 71% preferred the 4-day schedule, 17.5% had no preference, 10% did not prefer that schedule
- When registering for Summer Quarter, 94% encountered no difficulty related to the 4-day schedule; 2.3% had difficulty scheduling all their desired courses, 1% named other difficulties (lengthy lecture period, lack of access to DLL and computer labs)
- 2.3% reduced their desired courseload due to difficulty in scheduling all the courses
- During the quarter, 84.5% experienced no difficulty with the 4-day schedule, 4.5% preferred a 50 minute class 5 times per week, 4.5% experienced difficulty due to work hours, transportation or baby-sitting
- 58% of year-round C/D students prefer a 4-day schedule throughout the year, 18% had no preference, 24% were opposed; 16% of summer students were not attending C/D during the school year
- 930 students were enrolled in condensed classes; the average round-trip mileage from home to class was 18 miles. The average mileage reduction and cost savings per student was: 3-week session - 54 miles, $13.80; 5-week session - 90 miles, $23.00; 8-week session - 144 miles, $28.80; 10-week session - 180 miles, $36.00. Collectively, student driving was reduced by 127,181 miles at a savings of $25,432.00.

STUDENT SUCCESS RATES (N=908, comparable condensed classes enrollment)

- 34 courses were offered 5 days per week during Summer Quarter 1979 and condensed to 4 days per week for Summer Quarter 1980 within the same sessions
- 31 courses showed no correlation of withdrawal rate with the condensed classes, 3 courses showed greater withdrawal rates in the condensed classes and one course showed a greater withdrawal rate in the 5-day class
- No courses showed a correlation of failure rate with the condensed class
- 1980 class GPA did not differ significantly from class GPA of Summer Quarter 1979

ENROLLMENT IMPACT

- 2.3% of summer students decreased their desired course load due to difficulties which they perceived were caused by the 4-day week
- An estimated 1% reduction in summer FTE resulted from the reduced courseload of 2.3% of the students
- Enrollment in Summer Quarter 1980 condensed classes was similar to enrollment in Summer Quarter 1979 classes
- The reduction in FTE resulting from students who did not enroll in any class due to the 4-day schedule is not known
- Summer Quarter 1980 enrollment increased 30% and FTE increased 32% over Summer Quarter 1979

FACULTY REACTION (N=86, Summer Quarter faculty)

- 85% (71) were in favor of the 4-day schedule for summer quarters, 6% (5) were undecided, 8% (7) were opposed
- 89% (73) indicated the 4-day schedule caused no inconvenience to them, 11% (9) experienced some inconvenience (hot temperatures in Building A, no access to office on weekends)
- Of the 46 instructors who taught a condensed class, 78% (39) thought classroom activities were as effective as for the 5-day schedule; 16% (8) thought activities were not as effective; 6% (3) did not know
- 93% (77) were able to maintain office hours sufficient for student needs, 2% (2) were not able to, 5% (4) did not know
- 66% (56) were in favor of a 4-day schedule during the year, 18% (15) were opposed, 16% (14) were undecided

NON-TEACHING EMPLOYEE REACTIONS (N=206)

- 68% worked one of the 4-day options, 51% worked on 4 days, 32% worked their normal workweek
- 73% liked the 4-day week, 13% had no preference, 14% did not like it
- 75% experienced no problems because of the 4-day week, 5% experienced problems due to transportation, family obligations or the longer, tiring work day, 18% named various other problems (hot temperatures in the buildings, adjusting for absent employees)
- 58% estimated work productivity in their office was 90%-100% of 5-day week productivity, 9% estimated that it was 80%-90%, 4% estimated it at 70%-80%, 27% did not respond

- 46% estimated the work productivity in other offices was 90%-100% of 5-day week productivity, 21% estimates it was 80%-90%, 10% estimated it was 70%-80%, 10% did not respond

- 88% would opt for a 4-day week for summer quarters, 11% would not

- 70% would opt for a 4-day week during the school year, 30% would not (preferred during breaks only)

SAVINGS

- Collective mileage reduction by people who drove to campus one day less per week was 155,540. Mileage reduction by the different groups and the daily round trip average from home to class were: students - 127,181 miles (18 miles); faculty - 9,231 miles (15.7 miles); non-teaching employees - 19,128 (14 miles)

- Collective dollar savings by these people was $31,104; students - $25,432.20; faculty - $1,846.20; non-teaching employees - $3,825.60

- The dollar savings from employees who opted to reduce their working hours was not available

- The reduction in kilowatt hours used in Building A was approximately 443,115 kilowatt hours at a savings to the college of $23,136.00